

What is claimed is:

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1. A method for displaying picture frames using single field data in interlaced encoded image data having a two-field structure, comprising the steps of:
 - performing inverse quantization of the interlaced encoded image data to obtain DCT (Discrete Cosine Transform) coefficients of each of field blocks;
 - 5 selecting one of two fields forming each picture frame;
 - adding zero values after the DCT coefficients of each of field block in the selected field in order to obtain compensated DCT coefficients having a data size corresponding to one frame block; and
 - performing inverse DCT of the compensated DCT coefficients to obtain image
 - 10 data for each frame block.
 2. The method for displaying picture frames according to claim 1, further comprising the step of:
 - determining frames for which to perform motion compensative prediction; and
 - performing the motion compensative prediction of the image data
 - 5 corresponding to the frames to be compensated.
 3. A method for displaying picture frames using MPEG-2 (Moving Picture Experts Group 2) encoded image data obtained from NTSC (National Television System Committee) television signals, comprising the steps of:
 - performing inverse quantization of the interlaced encoded image data to obtain
 - 5 DCT (discrete cosine transform) coefficients for each field block;
 - alternatively selecting one of odd and even fields forming each picture frame at

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1/60 second intervals;

adding zero values after the DCT coefficients of each field block in the selected field in order to obtain compensated DCT coefficients having a data size corresponding to one frame block; and

performing inverse DCT of the compensated DCT coefficients to obtain pixel data for each frame block.

4. The method for displaying picture frames according to claim 3, further comprising the step of:

determining frames for which to perform motion compensative prediction; and

performing the motion compensative prediction of the image data corresponding to the frames to be compensated.

5. An apparatus for displaying picture frames using single field data in interlaced encoded image data having a two-field structure, comprising:

a compressed data buffer for loading and temporarily storing at least a part of the encoded image data;

an inverse quantizer for obtaining DCT (Discrete Cosine Transform) coefficients for each field block from the encoded image data stored in the compressed data buffer;

a selecting device for selecting one of two fields forming each picture frame;

a DCT coefficient addition device for adding zero values after the DCT coefficients of each field block in the selected field in order to obtain compensated DCT coefficients having a data length corresponding to one frame block;

an inverse DCT processing device for performing inverse DCT of the

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compensated DCT coefficients to obtain pixel data for each frame block; and

a frame data buffer for temporally storing the pixel data of the frame blocks.

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6. The apparatus for displaying picture frames according to claim 5, further comprising a device for determining frames for which to perform motion compensative prediction, and a device for performing the motion compensative prediction of the pixel data corresponding to the frames to be compensated.

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7. The apparatus for displaying picture frames according to claim 5, further comprising a storage device for storing the encoded image data to be displayed and a display device for displaying the pixel data.

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